**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claim 1 (currently amended): A method of suppressing a periodic disturbance signal component of a communication signal, the disturbance signal component having a known or determinable fundamental frequency, comprising:

generating an estimated disturbance signal component by correlating the communication signal with at least one of a sinusoid that is a function of the fundamental frequency and a cosinusoid that is a function of the fundamental frequency; ~~and~~

subtracting the estimated disturbance signal component from the communication signal<u>; and</u>

<u>compensating for a secondary disturbance associated with the subtracting of the estimated disturbance signal component from the communication signal in a transmission scheme having periods in which no information is transmitted</u>.

Claim 2 (original): A method according to claim 1, wherein the step of generating an estimated disturbance signal component comprises correlating the communication signal with a sinusoid that is a function of the fundamental frequency and a cosinusoid that is a function of the fundamental frequency.

Claim 3 (original): A method according to claim 1, wherein the step of generating an estimated disturbance signal component comprises correlating the communication signal over a predetermined number of samples, the predetermined number selected such that a sinusoid that is a function of the fundamental frequency has an integer number of periods.

Claim 4 (original): A method according to claim 1, wherein the step of generating an estimated disturbance signal component comprises estimating the

amplitude and phase of the disturbance signal component at the fundament frequency.

Claim 5 (original): A method according to claim 1, wherein the step of generating an estimated disturbance signal component comprises estimating the amplitude and phase of the disturbance signal component at the fundamental frequency, and its harmonic frequencies in a predetermined frequency range.

Claim 6 (original): A method according to claim 4, wherein the predetermined frequency range corresponds to a frequency range audibly detectable by the human ear.

Claim 7 (original): A method according to claim 1, wherein the step of generating an estimated disturbance signal component comprises estimating the amplitude and phase of the disturbance signal component at the fundamental frequency, and its harmonic frequencies in a predetermined frequency range, and summing a sinusoidal function of the amplitude and phase of the disturbance signal over a predetermined number of frequency components.

Claim 8 (original): A method according to claim 1, further comprising the step of processing the communication signal for transmission.

Claim 9 (currently amended): A method according to claim 1, ~~further comprising the steps of~~ wherein compensating for the secondary disturbance comprises:

determining the position of an idle frame where no information is transmitted in a multiframe structure transmission scheme; and

~~deactivating~~ suspending the ~~circuitry for~~ subtracting of the estimated disturbance signal component from the communication signal during processing of the idle frame.

Claim 10 (currently amended): A method according to claim 1, ~~further comprising the steps of~~ wherein compensating for the secondary disturbance comprises:

determining the position of an idle frame where no information is transmitted in a multiframe structure transmission scheme; and

adding a disturbance signal component into the idle frame.

Claim 11 (currently amended): A method of suppressing a periodic disturbance signal component of a communication signal, the disturbance signal component having a known or determinable fundamental frequency, comprising:

(a) calculating a first correlation array between the communication signal and a sinusoid that is a function of the fundamental frequency;

(b) calculating a second correlation array between the communication signal and a cosinusoid that is a function of the fundamental frequency;

(c) estimating the amplitude and phase of the disturbance signal component at the fundamental frequency and a predetermined number of harmonic frequencies;

(d) calculating the estimated disturbance signal as the sum, over the fundamental frequency and a predetermined number of harmonic frequencies, of a sinusoid that is a function of the fundamental frequency; ~~and~~

(e) subtracting the estimated disturbance signal from the communication signal; and

(f) compensating for a secondary disturbance associated with the subtracting of the estimated disturbance signal from the communication signal in a transmission scheme having periods in which no information is transmitted.

Claim 12 (original): A method according to claim 11, wherein the step of calculating a first correlation array comprises calculating:

$$B_{n,est.} = \frac{2}{K}\sum_{k=1}^{K} y_k \bullet \sin(2\pi(n\frac{f_0}{f_s})k)$$

Claim 13 (original): A method according to claim 11, wherein the step of calculating a first correlation array comprises calculating:

$$C_{n,est} = \frac{2}{K}\sum_{k=1}^{K} y_k \bullet \cos(2\pi(n\frac{f_0}{f_s})k)$$

Claim 14 (original): A method according to claim 11, wherein the step of estimating the amplitude of the disturbance signal component comprises calculating, for the fundamental frequency and a predetermined number of harmonic frequencies, the following:

$$A_{n,est} = ((B_{n,est})^2 + (C_{n,est})^2)^{1/2}$$

Claim 15 (original): A method according to claim 11, wherein the step of estimating the phase of the disturbance signal component comprises calculating, for the fundamental frequency and a predetermined number of harmonic frequencies, the following:

$$\Phi_{n,est} = \text{atan}(C_{n,est} / B_{n,est})$$

Claim 16 (original): A method according to claim 11, wherein the step of calculating the estimated disturbance signal comprises calculating:

$$e(k)_{est} = \sum_{n=1}^{15} A_{n,est} \bullet \sin(2\pi(n\frac{f_0}{f_s})k + \phi_{n,est}), \quad k \in [0, K-1]$$

Claim 17 (original): A method according to claim 11, further comprising the step of processing the communication signal for transmission.

Claim 18 (original): A method according to claim 11, wherein steps (a) through (e) are performed in a remote communication terminal, and further comprising the step of detecting whether the remote terminal is receiving speech input, and wherein steps (a) through (c) are performed only when there is no speech input to the remote terminal.

Claim 19 (currently amended): A method according to claim 11, ~~further comprising the steps of~~ wherein compensating for the secondary disturbance comprises:

determining the position of an idle frame where no information is transmitted in a multiframe structure transmission scheme; and

~~deactivating~~ suspending the ~~circuitry for~~ subtracting of the estimated disturbance signal component from the communication signal during processing of the idle frame.

Claim 20 (currently amended): A method according to claim 11, ~~further comprising the steps of~~ wherein compensating for the secondary disturbance comprises:

determining the position of an idle frame where no information is transmitted in a multiframe structure transmission scheme; and

adding a disturbance signal component into the idle frame.

Claim 21 (currently amended): A system for suppressing a periodic disturbance signal component having a fundamental frequency in a communication signal, comprising:

a module for generating an estimated disturbance signal component by correlating the communication signal with a sinusoid that is a function of the fundamental frequency and a cosinusoid that is a function of the fundamental frequency; ~~and~~

a module for subtracting the estimated disturbance signal from the communication signal; and

a module for compensating for a secondary disturbance associated with the subtracting of the estimated disturbance signal from the communication signal in a transmission scheme having periods in which no information is transmitted.

Claim 22 (currently amended): A remote communication terminal, comprising:

a conversion module for converting an analog signal into a communication signal comprising a set of digitized samples;

a processor for receiving the digitized samples from the conversion module and calculating an estimate of a disturbance signal component; ~~and~~

a module for subtracting the estimated disturbance signal component from the communication signal; and

a module for compensating for a secondary disturbance associated with the subtracting of the estimated disturbance signal from the communication signal in a transmission scheme having periods in which no information is transmitted.

Claim 23 (original): A remote communication terminal according to claim 22, further comprising:

a module for formatting the communication for transmission.

Claim 24 (original): A remote communication terminal according to claim 22, further comprising:

a module for transmitting the communication signal.

Claim 25 (new): The system of claim 21, wherein the module for compensating for the secondary disturbance comprises:

circuitry for determining the position of an idle frame where no information is transmitted in a multiframe structure transmission scheme; and

circuitry for deactivating the module for subtracting the estimated disturbance signal from the communication signal during processing of the idle frame.

Claim 26 (new): The system of claim 21, wherein the module for compensating for the secondary disturbance comprises:

circuitry for determining the position of an idle frame where no information is transmitted in a multiframe structure transmission scheme; and

circuitry for adding a disturbance signal component into the idle frame.

Claim 27 (new): The remote communication terminal of claim 22, wherein the module for compensating for the secondary disturbance comprises:

circuitry for determining the position of an idle frame where no information is transmitted in a multiframe structure transmission scheme; and

circuitry for deactivating the module for subtracting the estimated disturbance signal component from the communication signal during processing of the idle frame.

Claim 28 (new): The remote communication terminal of claim 22, wherein the module for compensating for the secondary disturbance comprises:

circuitry for determining the position of an idle frame where no information is transmitted in a multiframe structure transmission scheme; and

circuitry for adding a disturbance signal component into the idle frame.